

CLAIMS

1. A mechanical seal for providing a fluid-tight seal between relatively rotatable elements, the seal comprising first and second seal faces for mounting in fixed rotational relationship with respective first and second relatively rotatable elements, transmission means engaging said second seal face and extending axially therefrom in a direction away from said first seal face, means for biasing said transmission means, and thereby said second seal face, towards said first seal face, and drive means engaging said transmission means and for mounting in driving engagement with said second element, said drive means including at least one radially extending engagement portion which extends into an axially enclosed opening in said transmission means.
2. A mechanic seal according to claim 1 wherein said drive means includes at least two radially extending engagement portions and said transmission means includes at least two corresponding enclosed openings within which said engagement portions locate.
3. A mechanical seal according to claim 1 or claim 2 wherein the arrangement is such that rotational drive is transmitted from said drive means to said transmission means over a cross-sectional engagement area which is larger than the sum of the respective material thicknesses of said drive means and said transmission means.
4. A mechanical seal according to any of the preceding claims and including at least two said engagement portions, the seal being assembled by locating at least one engagement portion of said drive means in an enclosed opening of said transmission means, thereafter pivoting said drive means relative to the transmission means such that the outermost radial part of a second engagement portion on the drives means is an interference fit with the innermost radial part of the transmission means adjacent to that enclosed opening for accommodating the second engagement portion.

5. A mechanical seal according to claim 4 wherein the axial end of the second enclosed slot of the transmission means terminates within close proximity of the axial end of said transmission means to provide a thin section web which elastically deforms when presented to the interference fit of the engagement portion of said drive means.
6. A mechanical seal according to any of the preceding claims wherein said drive means and said transmission means are made of one or more thin materials.
7. A mechanical seal according to any of claim 1 to 5 wherein said drive means is made from relatively thick material and said engagement portion is provided by a machined lug.
8. A mechanical seal assembly according to any of claims 1 to 5 and 7 wherein said transmission means is made from relatively thick material.
9. A mechanical seal according to any of the preceding claims wherein said mechanical seal is in the form of a single component mechanical seal.
10. A mechanical seal according to any of claims 1 to 8 wherein said mechanical seal is in the form of a single cartridge mechanical seal.
11. A mechanical seal substantially as described herein with reference to any of Figures 3 to 9 of the accompanying drawings.
12. A mechanical seal according to claim 1 and substantially as herein described.